

Impacts of the Deepwater Horizon Oil Spill on the Deltaic *Phragmites australis* Marshes of  
Louisiana  
Technical Memorandum

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### Summary

*Phragmites australis* (Roseau cane) is an important wetland plant species in North America (Kiviat, 2013) that forms extensive stands in the Mississippi River Delta (White et al., 2004). Previous research (Judy et al. 2014) has indicated that although repeated stem oiling and/or soil oiling can impact growth responses, *Phragmites australis* is relatively resistant to oiling of aboveground tissues. *Phragmites australis* marshes in the Mississippi River Deltaic Plain (MRDP) experienced oiling subsequent to the Deepwater Horizon (DWH) spill (Michel et al., 2013). As part of the DWH Natural Resource Damage Assessment (NRDA), impacts of oiling on coastal wetland vegetation (CWV), including deltaic *Phragmites australis* marshes, were assessed (Hester and Willis, 2011). Due to limited land accessibility, only 21 CWV stations were established. Readers are referred to Hester and Willis (2011) for detailed information regarding the installation of CWV sampling stations, sampling approach, and analytical procedures. Statistical analyses of CWV data were performed as described in Shams et al. (2015). Although dead *Phragmites australis* vegetation cover increased with oiling in fall 2011, statistically significant impacts to key indicators of *Phragmites australis* health and productivity, such as total live vegetation cover, were generally not detected. Several factors should be considered when interpreting these results. These factors include the relatively small sample size, the delay in initial sampling in fall 2010, and the highly variable water levels of the habitat.

### References

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